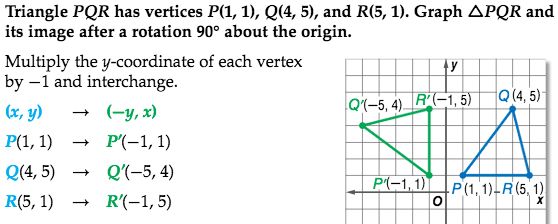
Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP:\_\_\_\_\_

CW 36: Rotations

**Honors Geometry**

Create a graph to make the predictions based on the given rotation in the coordinate plane.

1. The triangle YUM is plotted in the coordinate plane: Y, U, and M. The triangle is rotated clockwise 90 degrees about the origin.
2. Predict which quadrant U’ will end up in.
3. Explain how you determined your answer.
4. The ACT is plotted in the coordinate plane: , , and . The triangle is rotated counter-clockwise 90 degrees about the origin.
5. Predict which quadrant point A’ will end up in.
6. Rectangle , , , and . The rectangle is rotated 90 degrees clockwise about the origin.
7. What quadrant will Point E’ will end up in? Show work.
8. Rectangle , , , and . The rectangle is rotated 180 degrees clockwise about the origin.
9. What quadrant will Point R’ end up in? Show work.
10. Quadrilateral , , , and is rotated 180 degrees counter-clockwise about the origin.
    1. What quadrant will Point O’ end up in? Show work.

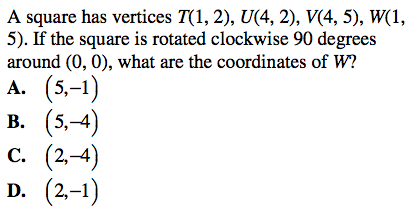
****Notice & Wonder – Trianlge PQR has vertices . It is rotated counter- clockwise about the origin.

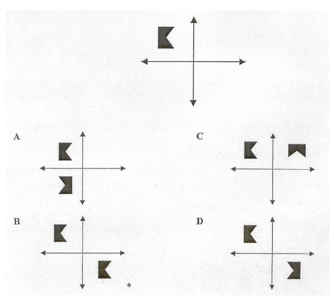
* What do you notice about the relationship between the points of the image and pre-image?
* What pattern can you identify?
* What would the pattern be if the shape were rotated clockwise ?

**Complete the transformations specified below. Create a graph and label the coordinates of the pre-image and the image for each problem below.**

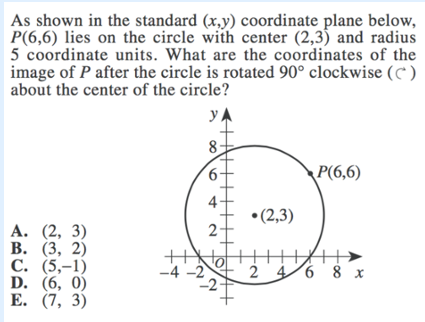
1. Rotation 90° counterclockwise about the origin
2. ; Rotation 90° clockwise about the origin
3. I(-1,-3); Rotation 90° counterclockwise about the origin
4. W(3,1); Rotation 90° clockwise about the origin
5. C(-1,-3); Rotation 180° about the origin
6. Z(5,-1); Rotation 90° clockwise about the origin
7. P(-4,4); Rotation 180° About the origin

Homework!

1. Rotate point H(3,6) 90° clockwise about the origin. Prove that H and H’ lie on lines perpendicular to one another.
2. Rotate triangle M(-3,0)G(-3,1)K(0,3) 90° counterclockwise about the origin.
3. A point is rotated clockwise about the origin. Jose thinks the rotated point will be located at . Explain why Jose is incorrect. What would the correct location of the rotated point be?
4. 



1. Which of the following graphs depicts a rotation? Explain your choice.
2. SHOW ALL OF YOUR WORK for the answer you got in #6.

****